



SILENCIO EC **SILENCIO COLUM EC**

THE LOW NOISE DOOR AIR CURTAIN

**INDIVIDUAL
INNOVATIVE
ENERGY-SAVING**

ERP | conform

SILENCIO EC

THE LOW NOISE DOOR AIR CURTAIN

+ Elegant steel-composite design

high-quality powder coated
or with stainless steel housing

+ Self-supporting sheet steel housing

high-quality powder coated

+ Attractive intake grille

with micro-intake grille behind it

+ Discharge fin

can be adjusted in 5 stages

+ Inspection panel

with hidden screws

Applications

Silencio EC and Silencio Colum EC are used in acoustically sensitive entry areas, e.g. close to where people are working. Installation-ready ventilation units which can be used for many applications and installation variants.

Silencio EC - Free-hanging or as cassette unit with intake on the underside for installation flush with the ceiling.

Silencio Colum EC - vertical design variant. The Silencio Colum EC will impress you with its low noise operation and curved design. The choice of standard RAL powder coatings or a stainless steel housing fit superbly in existing entry areas.

Special design

Silencio EC and Silencio Colum EC are characterised by a lower noise level when compared with other standard units. The sheet metal housing and the fan casing have been acoustically insulated. Low-speed fans and adapted heat exchangers contribute to a further reduction in the noise level.

The housing

Silencio EC - Self-supporting steel housing. Screws are not visible. High-quality powder coating, RAL 9016 as standard (traffic white). Other colours are available. Access panel hidden behind the intake grille. Aerodynamically-optimised aluminium discharge fin, flush with the underside of the unit and adjustable in 5 stages. Perforated metal intake grille with micro grille behind it as an intake filter.

Silencio Colum EC - Self-supporting steel-composite construction in a cylindrical shape with split sheet steel or stainless steel housing (polished to grain size 240) in a round-rolled design. Screws and rivets are not visible. Powder coated intake grille in the same colours as the unit or stainless steel version, consisting of a perforated plate with micro grille behind it for easy maintenance application. Aluminium discharge fins for an infinitely adjustable, unidirectional air stream

Heating media LPHW

Heat exchangers for different temperatures: for normal temperature LPHW 70/50°C and low-temperature LPHW 60/40°C, other temperatures available on request.

Advantages at a glance

- + Made in Germany
- + ErP conform / EC fans
- + Certified by TÜV-Süd
- + Particularly low noise
- + Robust, self-supporting sheet steel housing
- + Individual colours - standard RAL colours available / alternatively as stainless steel version
- + Individual unit lengths up to 2500 mm
- + Service-friendly thanks to filterless micro-intake grille
- + Simple to install
- + Aerodynamically-optimised discharge fin

+ **Aluminium profile discharge fins (drop form)**
for optimum airflow

+ **Attractive intake grille**
with micro-intake grille behind it

Maintenance

Easy to clean (micro grille) without opening the unit by simply vacuuming the intake grille.

Silencio EC - Discreet secured inspection panel hidden on the lower side of the unit (hinges on one side) – easy to open.

Silencio Colum EC - The intake grille must be removed before the revision panel can be opened. To do this, a cross-headed screw at the upper end of the intake grille must be removed. Then the intake grille can be taken out of the lower frame.

EC fans

The efficiency of the EC fans used by TEKADOOR is > 90% under partial load operation. This is approx. 30–35% higher than for conventional AC fans. This does not just increase the efficiency, but also reduces the operating costs. The individually-driven EC fans with integrated motor protection can intake air in both directions. They have vibration-free bearings and are controlled by a PWM signal (pulse width modulation). They do not just comply with Directive ErP, but actually exceed this standard.

Mounting

Silencio EC - Simple mounting thanks to the rivet nuts (M8) incorporated on the upper side of the unit and optionally-available

assembly materials. In the standard version, the unit does not need to be opened for electrical connection. Connection terminals for the voltage supply, as well as the connectors for the control unit and parallel operation can be accessed from the outside.

Silencio Colum EC - Floor mounted vertical unit: Problem-free mounting via holes in the floor plate directly on the finished flooring. The floor plate has appropriate holes for invisible energy supply from below. Optional: Power supply is also possible from above.

Control

Electronic TEKADOOR GTC EC control unit, multifunctional with touch display, including an optional ModBus interface

A GTC 1 EC control unit is used as standard for models with LPHW heating. The units come with 20 m preassembled and shielded data cable. The GTC 1 EC 5-stage control unit includes the ability to switch from manual to automatic and from summer mode to winter mode as standard. A solenoid valve of up to 2.5 A can be connected as an option for the winter mode. The control unit includes a manual to automatic mode switch and a potential-free contact for enabling via any on-site BMS or BEMS. A choice of 5-stage or stepless fan operation is offered as standard.

A maximum of 10 units can be connected in parallel.

SILENCIO EC

DETAILS



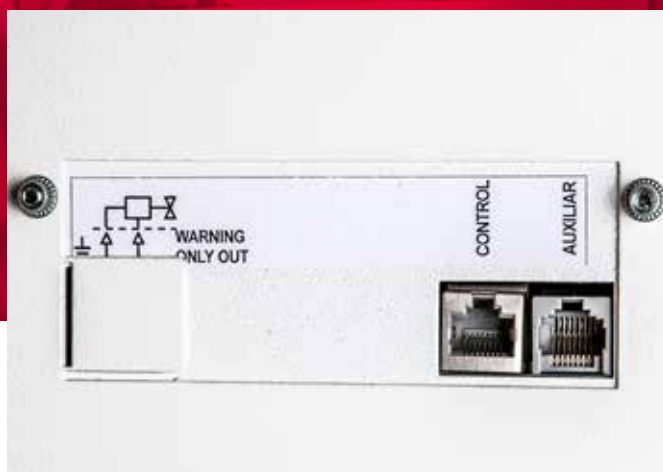
Connections

Heating connections – DN 32 flow and return – on top of the unit as standard (Silencio EC) or at the side (Silencio Cassette EC) for easy connection to the on-site heating system. Optionally, the connections can also be located at the side.



Connection box

Simple electrical connection via connection box (voltage supply 230 V/50Hz) on the top of the unit (Silencio EC) or at the side (Silencio Cassette EC); connection can optionally also be offset.



Data cable connection/interface

Simple, standard plug and play connection of the data cable and an optional solenoid valve on the top of the unit. The connection can be offset on request.

Control:

Input for the data cable to the control unit.

Auxiliary:

Output for parallel operation with other units.



Discharge fin

The shielding performance of the door air curtain unit is optimised by adjusting the discharge fin. The fin can be adjusted in 5 stages. During the heating period, the discharge fin should be tilted outwards by 10 to 15 degrees to prevent cold air coming in from the outside. In contrast, during operation in the summer, the fins are tilted inwards, so that the cooled indoor air cannot escape.

SILENCIO COLUM EC

DETAILS



Connections

Floor mounted vertical unit.

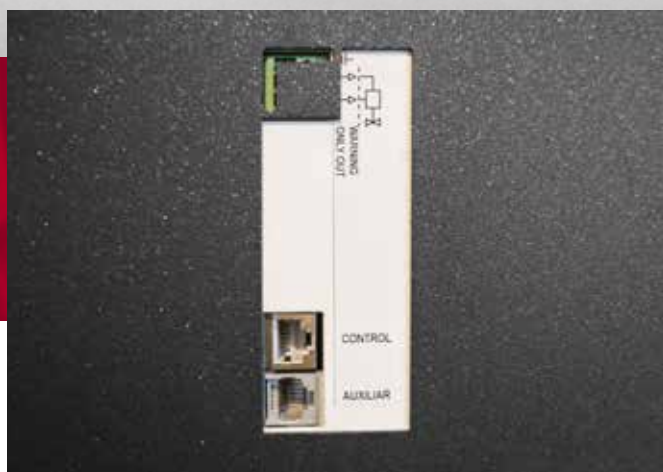
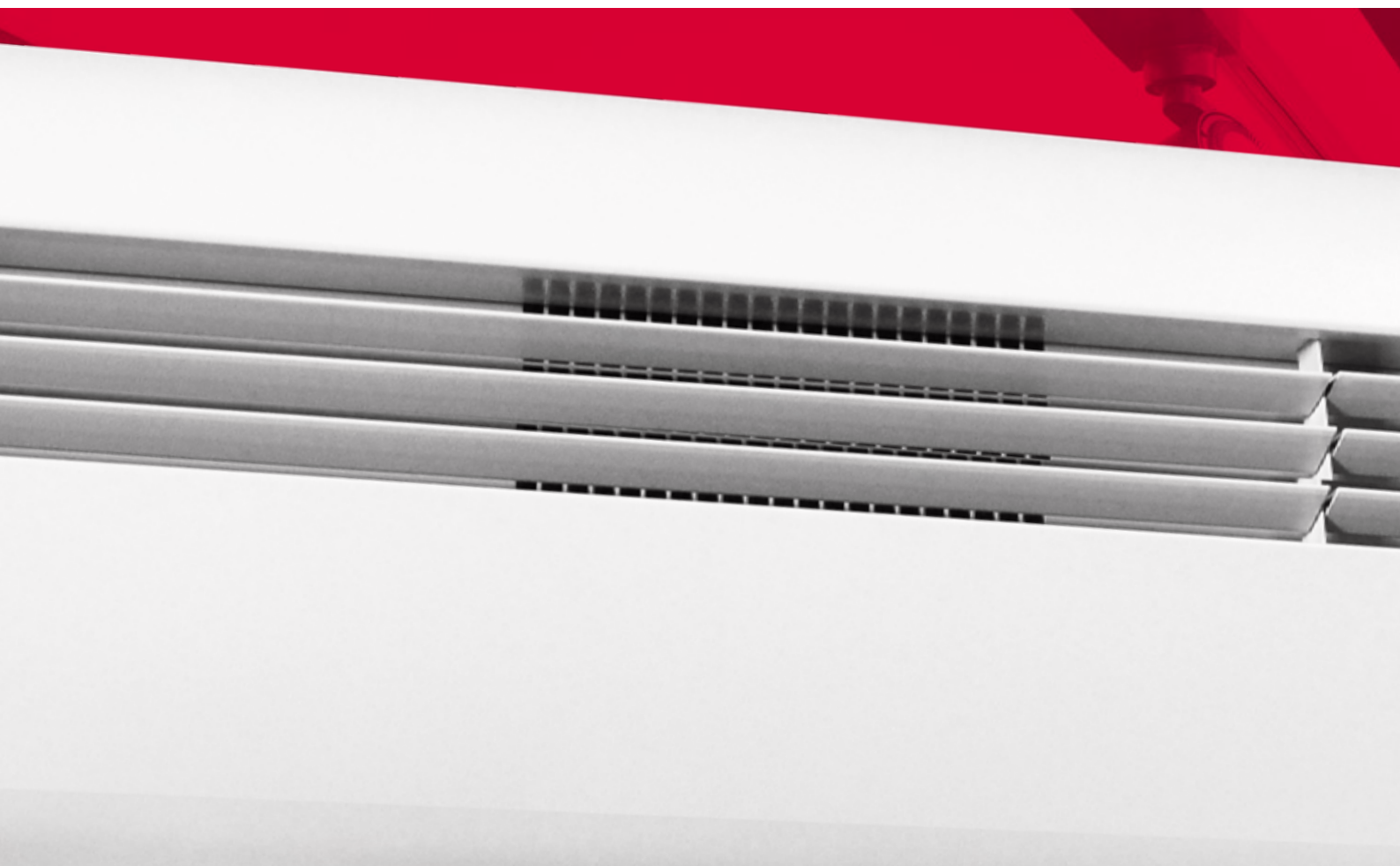
Heating connections – flow and return – for easy connection to the on-site heating system.

Connections: For the floor mounted vertical unit - either from below or above, invisible within the door air curtain.



Connection box

Simple electrical connection of the power supply 230 V/50 Hz thanks to the internal connection box.



Data cable connection/interface

Standard connection options for the data cable and an optional solenoid valve or thermo-electric shut-off valve within the unit. Simple plug and play of the data cable.

Control:

Input for the data cable to the control unit.

Auxiliary:

Output for parallel operation with other units.



Discharge fins

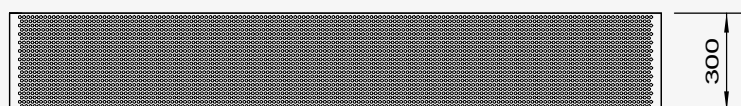
Aluminium discharge fins (drop profile), depending on the model available in designs with double or multiple fins, for an infinitely adjustable, unidirectional air stream. During the heating period, the fins should be tilted outwards by 10 to 15 degrees to prevent cold air coming in from the outside. In contrast, during operation in the summer, the fins are tilted inwards, so that the cooled indoor air cannot escape.

SILENCIO EC

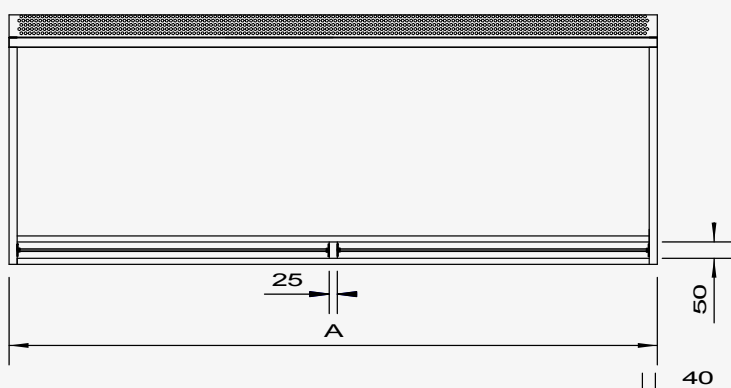
INSTALLATION VARIANTS

Free-hanging

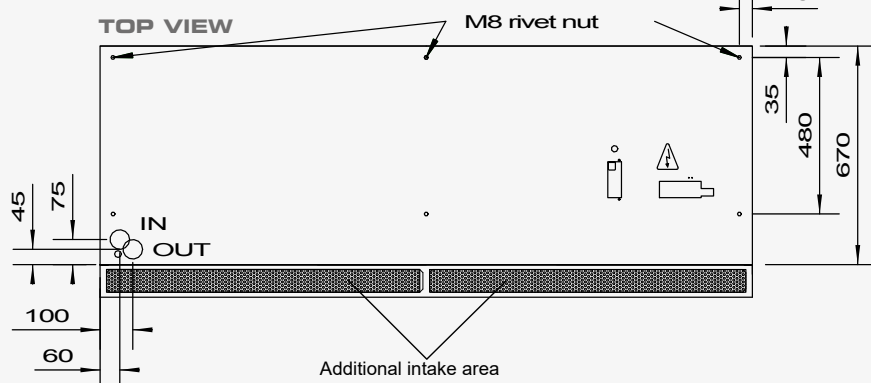
FRONT VIEW



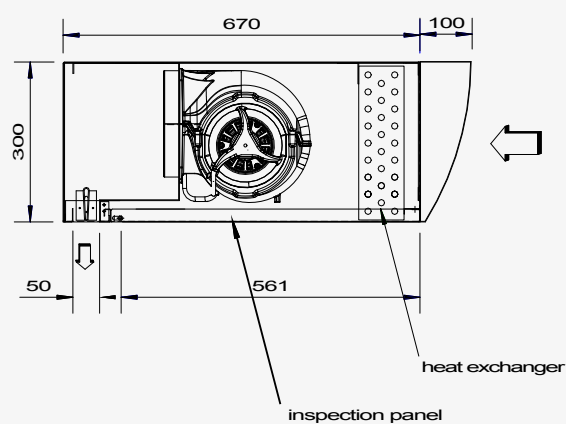
BOTTOM VIEW



TOP VIEW



SIDE VIEW



A = VARIABLE UNIT LENGTH

* WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES

Connection-ready free-hanging door air curtain unit for visible installation directly above the door.
Ambient air intake is at the front, on the room side.

SILENCIO

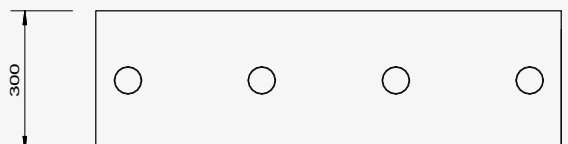
SILENCIO CASSETTE EC

INSTALLATION VARIANTS

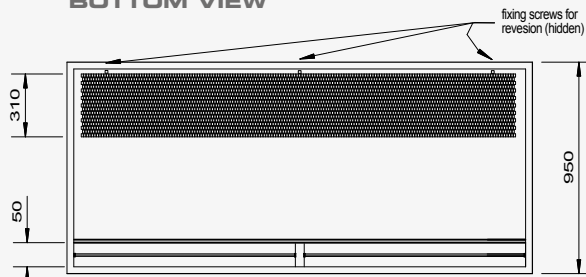


Cassette

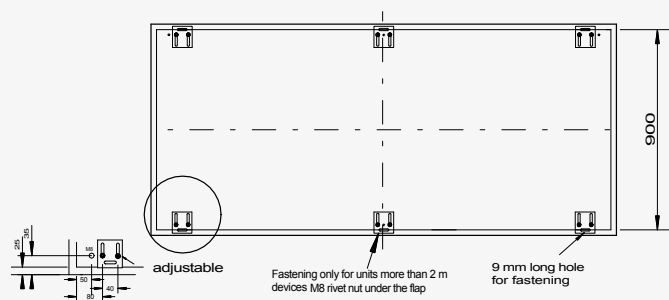
FRONT VIEW



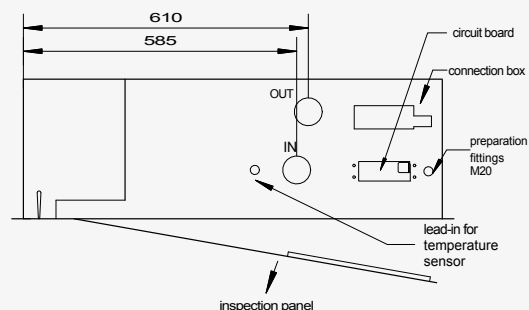
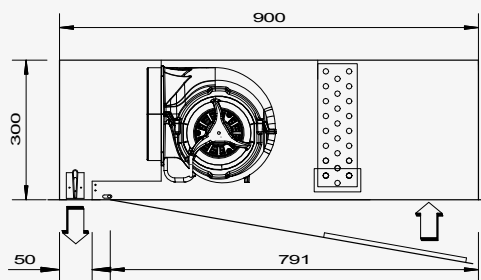
BOTTOM VIEW



TOP VIEW



SIDE VIEW



A = VARIABLE UNIT LENGTH

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Connection-ready door air curtain unit with intake on the underside for ceiling-flush installation. Ambient air intake is from the underside, on the room side. Freely accessible maintenance panel.

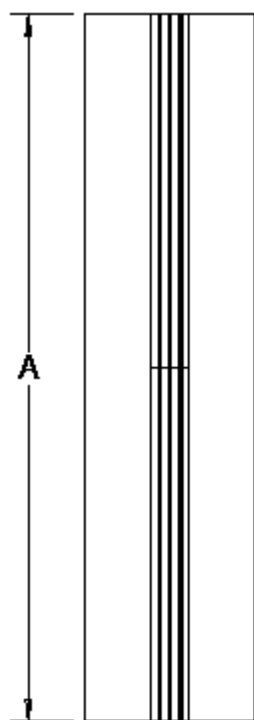
SILENCIO COLUM EC

INSTALLATION VARIANTS

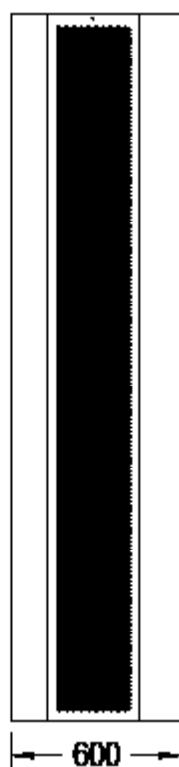
Floor mounted vertical unit

Installation left or right

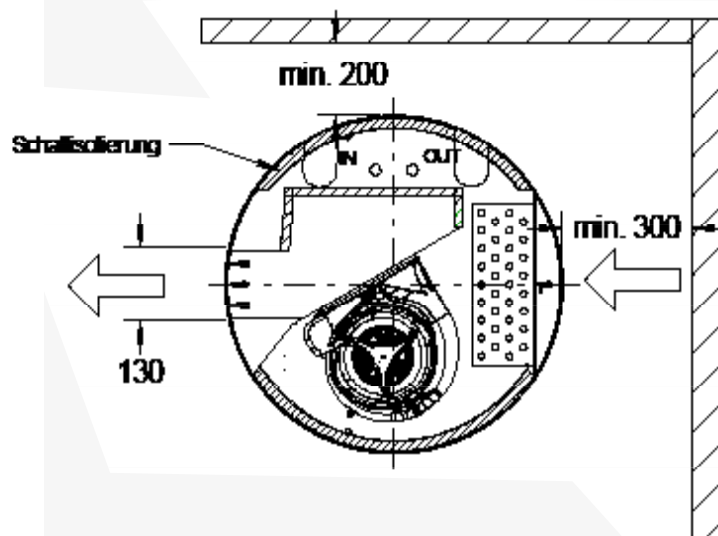
DISCHARGE SIDE



INTAKE SIDE



TOP VIEW

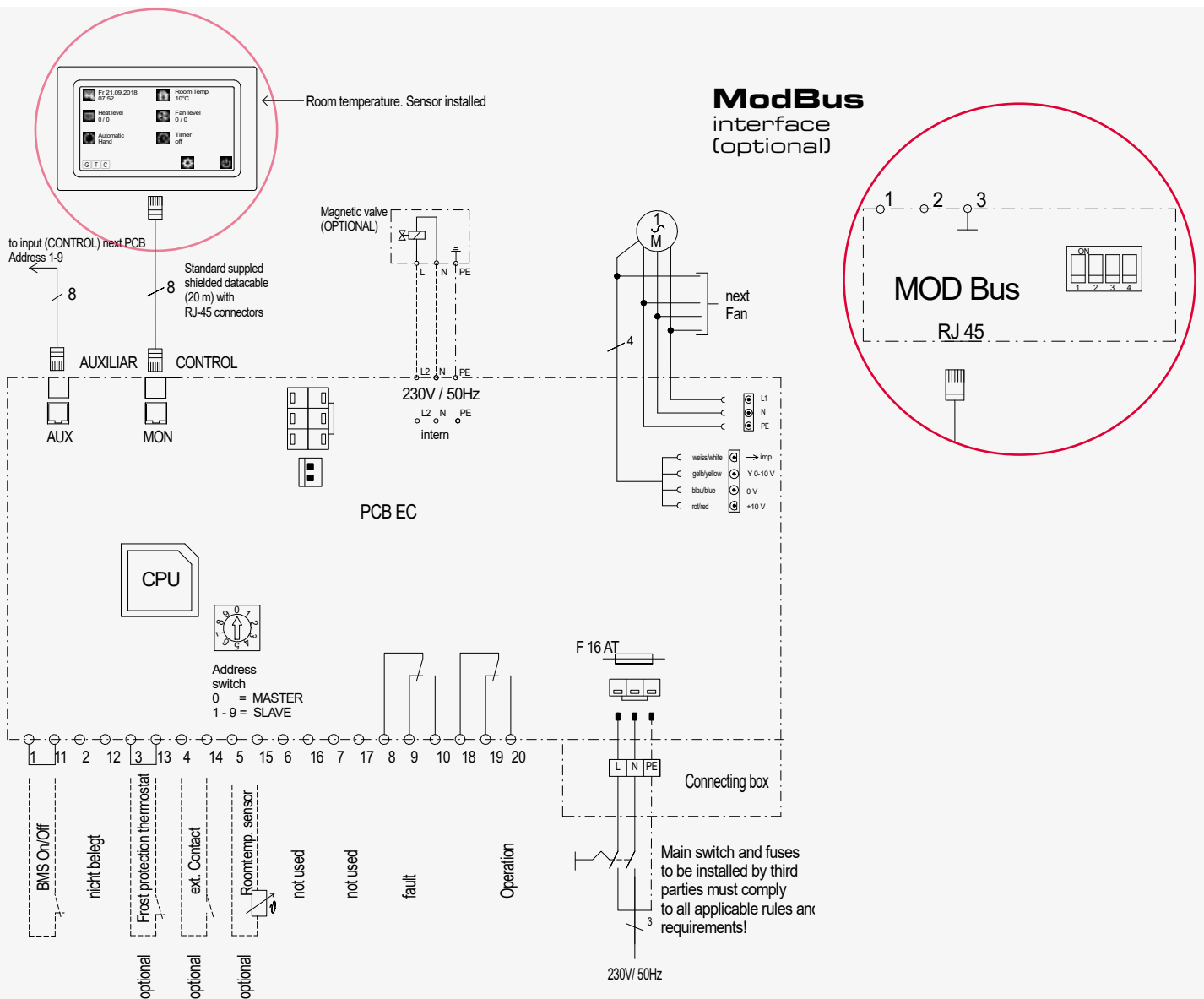


A = VARIABLE UNIT LENGTH

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Connection-ready door air curtain unit for operation with recirculating air, for installation at the side.

SILENCIO



* WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES

CONTROL UNIT GTC 1 EC

Multilingual, menu-driven electronic control unit for TEKADOOR air curtains with LPHW heating and energy-saving EC fans. A standard feature of the control unit with touch display is a choice between 5-stage or stageless fan control, which can be selected individually by the operator. The relevant operating modes and symbols are arranged clearly on the colour display. The date, time and room temperature are shown as standard. The room temperature is monitored via an internal temperature sensor in the control unit as standard.

An easy-to-navigate menu offers a selection of different operating modes:

Hand – manual operation

Auto AS – automatic operation via cool down protection

Auto RT – automatic operation via room temperature

Auto TK – automatic operation via door contact

Auto Kombi – option to combine all individual automatic modes

An enabling contact and potential-free operation and malfunction signals are provided for control via an on-site BMS or BEMS. Errors and faults are displayed with a red „warning“ sign. By coding the control boards differently, up to 10 door air curtains can also be operated in parallel with 1 control unit, using the Master/Slave principle. The control board is preinstalled in the door air curtain unit and 20 m of preassembled data cable (connection between the door air curtain and control unit) are included as standard.



SILENCIO EC

OPTIONAL ACCESSORIES



Thermostatic straight-way valve

(Setting range + 20 °C to + 35 °C) limits the discharge temperature (constant supply air temperature limitation). Also available as a 3-way valve.



Solenoid valve

Opens or closes the warm water circuit in the summer/winter setting of the control unit, in order to close the heating water circuit and save energy during summer operation or when the air curtain is not working (normally closed).

Caution: If solenoid valves are used, it is expressly recommended to install a frost protection thermostat (automatically actuated) and a strainer.



Thermo-electric shut-off valve

230 V / 50 Hz, normally closed. On-site installation in the heating flow. Actuated by the summer/ winter circuit. Summer function – closed. Winter function – opened.



Ceiling attachment set

For problem-free, vibration free ceiling attachment, consisting of M8 or M10 threaded rods, up to 1000 mm length, vibration dampers, turnbuckles and counter nuts.



Frost protection thermostat

For monitoring LPHW heat exchangers exposed to the risk of frost. As soon as the temperature falls below +7 °C, the fans are switched off and an optional solenoid valve is opened.



Control unit GTC 2 EC

Possibility of combination of various automatic operations. A constant discharge temperature can be set via an optional electronic control valve, and a week timer is incorporated as standard, enabling up to 12 different switching times to be programmed per week.



Electronic control valve

Electronic valve with 0-10V impulse and blow-out temperature sensor completely installed and wired. In combination with the GTC 2 control, a preselected blow-out temperature is kept constant.



Door contact solenoid switch

In automatic mode switches on the door air curtain in the preselected stage

SILENCIO / CASSETTE L EC

TECHNICAL DATA

Design based on:

recommended operating point
intake temperature t_{LE} = +20 °C
discharge temperature t_{LA} = +33 °C
discharge height = up to 2.80 m

Model				L 1	L 1.5	L 2	L 2.5
Air quantity max:		m³/h		1760	2640	4400	5280
Heating capacity	rated ¹	LPHW 60 / 40 °C	kW	7.6	11.65	18.83	23.12
		PWW 60 / 40 °C	m³/h	0.37	0.55	0.74	0.92
Flow rate		PWW 60 / 40 °C	m³/h	0.37	0.55	0.74	0.92
Water resistance		PWW 60 / 40 °C	kPa	5.4	4.6	9.0	2.3
Nominal connection sizes	Internal thread	Inches		2 x 1 ^{1/4"}	2 x 1 ^{1/4"}	2 x 1 ^{1/4"}	2 x 1 ^{1/4"}
	Flow/return	DN		32	32	32	32
EC fans	Voltage	V		230 / 1 / N / PE			
	Frequency	Hz		50			
	Max. current consumption	A		1.2	1.5	1.9	2.3
	Max. motor power	kW		0.25	0.30	0.40	0.50
Sound pressure level ²	Highest setting	dB (A)		48	49	50	51
Drawing dimension	Unit length (A)	mm		1000	1500	2000	2500
	Unit height ³	mm		300/440	300/440	300/440	300/440
	Unit depth ³	mm		770/1220	770/1220	770/1220	770/1220
Weight	Silencio EC	kg		60	80	100	120
	Silencio Cassette EC	kg		75	110	130	150

* WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES

1. Rated operation based on operating point (see above), discharge temperature control recommended.

2. Measured at a lateral distance of 3 m.

3. Dimension changes for Silencio Cassette EC to 440 and 1220 mm.

DX heat exchanger for operation with heat pumps available on request.

A well-balanced pressure ratio is one of the prerequisites for perfect function.

Design based on:

recommended operating point
intake temperature t_{LE} = +20 °C
discharge temperature t_{LA} = +33 °C
throw distance = up to 2.80 m

SILENCIO COLUM EC			2	2.5
Air quantity max.		m³/h	4400	5280
Heating capacity rated¹	LPHW 60 / 40 °C	kW	18.83	23.12
Flow rate	LPHW 60 / 40 °C	m³/h	0.74	0.92
Water resistance	LPHW 60 / 40 °C	kPa	9.0	2.3
Nominal connection sizes	Internal thread	Inch- es	2 x 1 1/4"	2 x 1 1/4"
	Flow/return	DN	32	32
EC fans	Voltage	V	230 / 1 / N / PE	
	Frequency	Hz	50	
	Max. current consumption	A	1.9	2.3
	Max. motor power	kW	0.4	0.5
Sound pressure level²	Highest setting	dB(A)	52	53
Drawing dimension	Unit height/width (A)	mm	2000	2500
	Diameter	mm	600	600
Weight	Silencio Colum EC	kg	125	145

* WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES

1. Rated operation based on operating point (see above), discharge temperature control recommended.

2. Measured at a lateral distance of 3 m. The sound pressure level may vary depending on the environmental conditions.

A well-balanced pressure ratio is one of the prerequisites for perfect function.

www.TEKADOOR.de



German headquarters

TEKADOOR GmbH
Albert-Einstein-Str. 11
D-40764 Langenfeld

T. +49 (0) 2173 - 20766-0
F. +49 (0) 2173 - 20766-111
E. info@tekadoor.de

